Appendix G

COASTAL ZONE MANAGEMENT FEDERAL CONSISTENCY EVALUATION

FLORIDA COASTAL ZONE MANAGEMENT PROGRAM
FEDERAL CONSISTENCY EVALUATION PROCEDURES

Tamiami Trail Modifications
Dade County, Florida

1. Chapter 161, Beach and Shore Preservation. The intent of the coastal construction permit program established by this chapter is to regulate construction projects located seaward of the line of mean high water and which might have an effect on natural shoreline processes.

Response: The proposed plans and information will be submitted to the state in compliance with this chapter. Construction will not be located seaward of the line of mean high water or where it might have an effect on natural shoreline processes.

2. Chapters 163 (part II), 186, and 187, County, Municipal, State and Regional Planning. These chapters establish the Local Comprehensive Plans, the Strategic Regional Policy Plans, and the State Comprehensive Plan (SCP). The SCP sets goals that articulate a strategic vision of the State's future. Its purpose is to define in a broad sense, goals, and policies that provide decision-makers directions for the future and provide long-range guidance for an orderly social, economic, and physical growth.

Response: The proposed project has been coordinated with various Federal, State, and local agencies during the planning process. The proposed project involves identifying a means for conveying increased flows of water under U.S. Highway 41 (Tamiami Trail) to the Everglades National Park (ENP) as part of the Modified Water Deliveries (MWD) Program to restore natural hydrologic conditions in ENP. The project would provide for the enhancement and assist in the restoration of the Everglades ecosystem. The project is in full compliance with the goals of this chapter.

3. Chapter 252, Disaster Preparation, Response and Mitigation. This chapter creates a state emergency management agency, with the authority to provide for the common defense; to protect the public peace, health and safety; and to preserve the lives and property of the people of Florida.

Response: The proposed project would have little or no impact on disaster preparation. Full conformance and compliance consistent with the efforts of Division of Emergency Management is intended.

4. Chapter 253, State Lands. This chapter governs the management of submerged state lands and resources within the state. This includes archeological and historical resources; water resources; fish and wildlife resources; beaches and dunes; submerged grass beds and other benthic communities; swamps, marshes and other wetlands; mineral resources; unique natural features; submerged lands; spoil islands; and artificial reefs.

Response: Each type of resources protected to the extent practicable under this statute is addressed in the EIS. The project is aimed at providing for full conformance and compliance with the goals of this chapter.

5. Chapters 253, 259, 260, and 375, Land Acquisition. This chapter authorizes the state to acquire land to protect environmentally sensitive areas.

Response: Implementation of the proposed plan does not require State acquisition of lands for the purposes of protection of environmentally sensitive areas.

6. Chapter 258, State Parks and Aquatic Preserves. This chapter authorizes the state to manage state parks and preserves. Consistency with this statute would include consideration of projects that would directly or indirectly adversely impact park property, natural resources, park programs, management or operations.

Response: To the northern boundary of the project area is Water Conservation Area 3B (WCA-3B) of the South Florida Water Management District, the Francis S. Taylor Wildlife Management Area. The Florida Fish and Wildlife Conservation Commission (FWC) manages this area for recreation. The project is not anticipated to adversely affect state lands; in fact, the proposed project attempts to restore hydrologic flows from WCA-3B to ENP. Full conformance and compliance with the requirements for protecting these resources is intended.

7. Chapter 267, Historic Preservation. This chapter establishes the procedures for implementing the Florida Historic Resources Act responsibilities.

Response: This project will be coordinated with the State Historic Preservation Officer (SHPO). Historic Property investigations were conducted in the project area. An archival and literature search, in addition to an archaeological survey of the proposed project area, was conducted. Based on previous cultural resource surveys, the proposed project area contained four sites considered potentially eligible for listing in the National Registry of Historic Places (NRHP), and coordination with SHPO will continue. The project is consistent with the goals of this chapter.

8. Chapter 288, Economic Development and Tourism. This chapter directs the state to provide guidance and promotion of beneficial development through encouraging economic diversification and promoting tourism.

Response: This project would not adversely impact beneficial development, economic diversification, or tourism. Contribution from the project area to the State's tourism economy will not be compromised by project implementation. The recommended plan may enhance tourism traffic in the area as the elevated portion of the highway will offer an unimpeded view of the ENP.

9. Chapters 334 and 339, Transportation. This chapter authorizes the planning and development of a safe, balanced and efficient transportation system.

Response: Tamiami Trail is not one of the "officially designated" evacuation routes authorized for reverse-laning. However, due to its location as the southern-most east-west artery in the state, Tamiami Trail provides critical eastbound and westbound coast-to-coast access between Miami and Naples. The use of Tamiami Trail as an "implied" evacuation route would require that the highway's evacuation route capabilities be maintained during hurricane season. This may influence construction phasing and maintenance of traffic flows during construction. The project will be consistent with the goals of this chapter.

10. Chapter 370, Saltwater Living Resources. This chapter directs the state to preserve, manage and protect the marine, crustacean, shell and anadromous fishery resources in

state waters; to protect and enhance the marine and estuarine environment; to regulate fishermen and vessels of the state engaged in the taking of such resources within or without state waters; to issue licenses for the taking and processing products of fisheries; to secure and maintain statistical records of the catch of each such species; and, to conduct scientific, economic, and other studies and research.

Response: The proposed project would not adversely impact saltwater living resources. Based on overall impacts of the project, the project is consistent with the goals of this chapter.

11. Chapter 372, Living Land and Freshwater Resources. This chapter establishes the Game and Freshwater Fish Commission and directs it to manage freshwater aquatic life and wild animal life and their habitat to perpetuate a diversity of species with densities and distributions which provide sustained ecological, recreational, scientific, educational, aesthetic, and economic benefits.

Response: The project has been closely coordinated with the FWC and should have no significant adverse effects on freshwater aquatic or wild animal life. The project is expected to benefit wildlife through its contribution toward the hydrologic restoration of Northeast Shark River Slough in ENP.

12. Chapter 373, Water Resources. This chapter provides the authority to regulate the withdrawal, diversion, storage, and consumption of water.

Response: The project sponsor is the South Florida Water Management District. The plans for withdrawal, diversion, storage, and consumption of water are fully coordinated with the sponsor, and a recommendation would be made with full concurrence from the State.

13. Chapter 376, Pollutant Spill Prevention and Control. This chapter regulates the transfer, storage, and transportation of pollutants and the cleanup of pollutant discharges.

Response: The contractor must comply with all applicable local, State and Federal environmental laws. Compliance with State law will require the contractor to obtain a General Construction National Pollutant Discharge Elimination System (NPDES) Permit. The NPDES program requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which will address the storage, generation, and disposal of hazardous and toxic substances. All activities will conform to state regulations.

14. Chapter 377, Oil and Gas Exploration and Production. This chapter authorizes the regulation of all phases of exploration, drilling, and production of oil, gas, and other petroleum products.

Response: This project does not involve the exploration, drilling or production of gas, oil or other petroleum products. Therefore, this chapter does not apply to the proposed project.

15. Chapter 380, Environmental Land and Water Management. This chapter establishes criteria and procedures to assure that local land development decisions consider the regional impact nature of proposed large-scale development. This chapter also deals with the Area of Critical State concern program and the Coastal Infrastructure Policy,

Response: The proposed project will not promote any large-scale development or have an impact defined as regional development. Therefore, the project is consistent with the goals of this chapter.

16. Chapter 381 (selected subsections on on-site sewage and disposal systems) and 388 (Mosquito/Arthropod Control). Chapter 388 provides for a comprehensive approach for abatement or suppression of mosquitoes and other pest arthropods within the state.

Response: The projects will not further the propagation of mosquitoes or other pest arthropods.

17. Chapter 403, Environmental Control. This chapter authorizes the regulation of pollution of the air and waters of the state by the Florida Department of Environmental Regulation [now a part of the Florida Department of Environmental Protection (FDEP)].

Response: The project is in compliance with both the Clean Water Act of 1972 and the Clean Air of 1970. This project is being fully coordinated with FDEP. Full compliance with State regulations is accomplished.

18. Chapter 582, Soil and Water Conservation. This chapter establishes policy for the conservation of the state soil and water through the Department of Agriculture. Land use policies will be evaluated in terms of their tendency to cause or contribute to soil erosion or to conserve, develop, and utilize soil and water resources both onsite or in adjoining properties affected by the project. Particular attention will be given to projects on or near agricultural lands.

Response: The proposed project is not located on or near agricultural lands, including those considered to be prime and/or unique farmlands. Therefore, this chapter does not apply.

Appendix H

REAL ESTATE APPENDIX

DRAFT
August 2005

REAL ESTATE PLAN

APPENDIX H

June 2005 ct

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1. STATEMENT OF PURPOSE

a. This Real Estate Plan is tentative in nature for planning purposes only and both the final real property acquisition lines and the real estate cost estimates provided are subject to change even after approval of the Modified Water Deliveries to Everglades National Park, Tamiami Trail General Re-evaluation Report.

b. A Real Estate Design Memorandum (REDM) was prepared and approved for the Modified Water Deliveries to Everglades National Park General Design Memorandum (GDM); however, both the REDM and GDM only addressed a portion of Tamiami Trail.

2. AUTHORIZATION

The Everglades National Park Protection and Expansion Act (PL 101-299, Section 104, 16 U.S.C. Part 410r-5 et seq.), December 1989, authorized the Secretary of the Army to undertake certain actions to improve water deliveries to Everglades National Park (ENP) to the extent practicable to restore natural hydrologic conditions. This act provides the underlying authority for this project. The Act directed the U.S. Army Corps of Engineers (USACE) to address restoration of water deliveries and natural hydrological conditions.

The 1992 General Design Memorandum (GDM) and its associated Final Environmental Impact Statement (FEIS) called for in the Act was completed in June 1992. The 1992 GDM/FEIS is the authorizing document for structural modifications and additions to deliver water for ecosystem restoration in ENP.

3. PROJECT DESCRIPTION

Under the Modified Waters Deliveries to Everglades National Park Project, authorized by the Everglades National Park Protection and Expansion Act of 1989, water deliveries to the ENP will be improved as a step to restore natural hydrologic conditions and increased flows to the ENP. Water from Water Conservation Area 3B will enter the L-29 Canal, pass under Tamiami Trail and enter the ENP.

The study area is located in the west central portion of Miami-Dade County, Florida. The areas subject to direct impacts from the project are on either side of U.S. Highway 41, Tamiami Trail. The Tamiami Trail, the L-29 Canal and the L-29 Levee on the north side of the canal form the southern boundary of Water Conservation Area (WCA) 3B. The south side of the Tamiami Trail is bounded primarily by ENP.

The limits of the project begin at S-334 slightly more than one mile west of the intersection of Krome Avenue (State Road 997) and the Tamiami Trail and extend westward along the highway approximately 10.7 miles to Water Control Structure S-333. The L-29 Canal (Tamiami Canal) runs along the north side of the Tamiami Trail through this area. The project limits are bounded at each end by water control structures, S-333 on the west and S-334 on the east.

The tentatively selected plan (TSP) is described as removing a portion of the existing roadway and constructing a raised profile roadway consisting of two 12-foot wide travel lanes and 8-foot wide shoulders on each side of the roadway. Five feet of this shoulder would be paved and a guardrail would be located at the outside edges of the shoulders. There will be two bridges constructed, one two-mile bridge on the western side of the project and one one-mile bridge on the eastern side of the project. Both bridges will provide two 12-foot wide travel lanes with 8-foot shoulders and outside barriers. Connecting roads intersecting the bridged portions of the project would be provided for access to Everglades Safari and Jefferson Pilot Communications site.

There are seven privately owned parcels located along the trail that will be acquired by Department of Interior (DOI). These lands were authorized for acquisition as part of Everglades National Park Protection and Expansion Act of 1989. The DOI, thru the National Park Service, is currently scheduled to acquire the appropriate interest in these parcels by August 2006. There may be some relocation assistance payments associated with the purchase of these parcels but no costs are included in this report. Current owners of these parcels are identified as: Florida Power and Light, Radio One, Margaret Hutton, Coopertown, Gator Park, Everglades Safari and Jefferson Pilot Communication Site. The proposed location of the two mile bridge on the western end of the project may effect the day to day operations of the Everglades Safari. The parking along the road frontage and a pavilion will be lost due to bridge construction. Information on remaining ownerships is not sufficient at this time to determine how they will be effected.

Section 103. (d) of the Everglades National Park Protection and Expansion Act of 1989 authorizes DOI to “negotiate and enter into concession contracts with the owners of commercial airboat and tour facilities in existence on or before January 1, 1989..”. DOI and the landowners may enter into such agreements; however, at a minimum, a perpetual flowage easement is required over these parcels. DOI is preparing a long term management plan to determine whether or not concessions within the Park boundary will be allowed. A potential site for a concession may be the Everglades Safari due to the extensive improvements located on the property.

Access ramps from the two-mile bridge will be required to access Jefferson Pilot Communication and Everglades Safari. Lands required for the

ramps will be included in the perpetual right of way for the bridge construction. No access ramps are required for the one-mile bridge.

The USACE will acquire a perpetual flowage easement and, if needed, a temporary (48 months) access and disposal area easement from the Airboat Association of Florida. The perpetual flowage easement consists of 10 acres and has an estimated fee value of $850,000. The temporary disposal area easement may be needed for a period of 48 months, and consists of approximately 5 acres. Sufficient information is not available at this time to determine if special benefits will offset compensation for the temporary interest. Relocation assistance benefits are estimated at $50,000 for residential and $50,000 for moving expenses.

The proposed primary disposal area for this project consists of ___ acres and is located south of Richmond Drive in the Rocky Glades area on lands authorized as part of the C&SF C-111 Project. No costs are included in this project for these lands since SFWMD will certify and receive credit as part of the C-111 Project. SFWMD will be asked to certify these lands prior to award of the construction contract.

The proposed staging/work areas will be located within the existing FDOT right of way or on Government owned lands. No costs are included in this report.

A borrow area is not needed for this project since the material required for construction will be purchased from a commercial source.

Neither the Government nor the South Florida Water Management District currently have any defined rights to flow water through the existing culverts under Tamiami Trail. These culverts were installed by the Florida Department of Transportation to discharge waters from the L-29 canal to the lands being acquired for the Everglades National Park Expansion area and to prevent erosion of the roadbed of Tamiami Trail. The culverts were in place at the time the L-29 canal was transferred to the SFWMD for the C&SF project. The construction and replacement of the portion of Tamiami Trail will be a facility relocation and will require a relocation contract to be executed between the Florida Department of Transportation and the Federal Government. As part of the relocation contract, FDOT will grant to the Federal government the right to replace/construct the existing facility and a perpetual channel improvement easement for conveyance of water under the roadway. FDOT will grant to SFWMD the right to operate and maintain the conveyance features located under the Tamiami Trail. An alternative to acquiring the perpetual and temporary easements for construction, operation and maintenance may be to acquire irrevocable permits from Florida Department of Transportation, if more appropriate. The terms of the permits would have to provide substantially the same rights.

The Department of Interior will grant the Florida Department of Transportation a perpetual road easement, or alternative document with equivalent rights, for the ENP lands required for construction, operation and maintenance of the road. After these rights have been conveyed to FDOT, the USACE will have the right to construct on these lands by rights granted via the relocation agreement. Acreage is estimated to be _____ acres.

The USACE will grant the FDOT a perpetual road easement for the lands required for construction, operation and maintenance of the road purchased from Airboat Association of Florida. Acreage is estimated to be _____ acres.

4. SPONSOR OWNED LANDS

A. FEDERAL

The Department of Interior, National Park Service, Everglades National Park owns lands south of Tamiami Trail.

B. NON-FEDERAL

Lands immediately north of the project are owned in fee or controlled by South Florida Water Management District.

Florida Department of Transportation owns or controls lands within the existing roadway.

5. ESTATES

A. STANDARD ESTATES

CHANNEL IMPROVEMENT EASEMENT

A perpetual and assignable right and easement to construct, operate and maintain channel improvement works on, over and across (*The land described in Schedule A*) (*Tracts Nos.*_____, _____ *and* _____) including the right to clear, cut, fell, remove and dispose of any and all timber, trees, underbrush, buildings, improvements and/or other obstructions therefrom; to excavate, dredge, cut away, and remove any and all of said land and to place thereon dredge or spoil material; and for such other purposes as may be required in connection with said work of improvement; reserving, however, to the owners, their heirs and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easements hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

TEMPORARY WORK AREA EASEMENT

A temporary easement and right-of-way in, on, over and across (*The land described in Schedule A*) (*Tracts Nos.*_____*,* _____ *and* _____), for a period not to exceed 48 MONTHS, beginning with date possession of the land is granted to the United States, its representatives, agents and contractors as a work area, including the right to move, store and remove equipment and supplies and erect and remove temporary structures on the land and to perform any other work necessary and incident to the construction of _____ Project, together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions, and any other vegetation, structures, or obstacles within the limits of the right-of-way; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

TEMPORARY ACCESS ROAD EASEMENT

A temporary and assignable easement and right-of-way in, on, over and across the land described in Schedule A (Tract ___) for a period not to exceed 48 MONTHS, beginning with date possession of the land is granted to the United States, its representatives, agents and contractors for the location, construction, operation, maintenance, alteration, replacement of a road and appurtenances thereto; together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions and other vegetation, structures, or obstacles within the limits of the right-of-way; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

B. NON-STANDARD ESTATES

PERPETUAL FLOWAGE EASEMENT

The perpetual right, power, privilege and easement permanently to flow water in, under and through Tamiami Trail located and described *in Schedule A* (*Tracts No* _____), to elevation 10.1 feet NGVD, in connection with the operation and maintenance of the Modified Deliveries to Everglades National Park project as authorized by the Act of Congress approved _____, provided that the existing culverts shall not be removed or altered without the express written permission of the representative in charge of the project; together with the right, but not the obligation, to clear and remove brush, debris and natural obstructions from the culverts which interfere with the flow of water; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used and enjoyed without interfering with the use of the project for the purposes authorized by congress or abridging the rights and easement hereby acquired; provided further that any use of the land shall be subject to Federal and State laws with respect to pollution.

ESTATES REQUIRED FROM THE AIRBOAT ASSOCIATION OF FLORIDA

PERPETUAL ROAD ACCESS EASEMENT

A perpetual and assignable easement and right-of-way in, on, over and across the land described in Schedule A (and known as Tract 500E) for the location, construction, operation, maintenance, alteration, replacement of a road and appurtenances thereto; together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions and other vegetation, structures, or obstacles within the limits of the right-of-way; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

TEMPORARY WORK AREA EASEMENT

A temporary and assignable easement and right-of-way in, on, over and across the land described in Schedule A, and described as Tract 500E, for a period not to exceed forty-eight (48) months, beginning upon the date possession of the land is granted to the United States, for use by the United States, its representatives, agents, assignees and contractors as a work area, including the right to borrow and/or deposit fill, spoil and waste material thereon; move, store and remove equipment and supplies; and erect and remove temporary structures on the land and to perform any other necessary work, together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions, and any other vegetation, structures, or obstacles within the limits of the right-of-way; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

PERPETUAL FLOWAGE EASEMENT

The perpetual and assignable right, power, privilege and easement permanently to overflow, flood and submerge Tract No. 500E (and to maintain mosquito control) in connection with the operation and maintenance of the federal and state project(s) as authorized, and the continuing right to clear and remove any brush, debris and natural obstructions which, in the opinion of the representative of the United States or its non-federal local sponsor in charge of the project, may be detrimental to the project, together with all right, title and interest in and to the timber, structures and improvements situate on the land excepting none; provided that no structures for human habitation shall be constructed or maintained on the land below 10.1 feet NGVD, that no other structures shall be constructed or maintained on the land except as may be approved in writing by the representative of the United States or its non-federal local sponsor in charge of the project, and that no excavation shall be conducted and no landfill placed on the land without such approval as to the location and method of excavation and/or placement of landfill; the above estate is taken subject to existing easements for public roads and highways, public utilities, railroads and pipelines;

reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used and enjoyed without interfering with the use of the project for the purposes authorized by Congress or abridging the rights and easement hereby acquired; provided further that any use of the land shall be subject to Federal and State laws with respect to pollution.

6. NAVIGATION SERVITUDE

No land in the area is subject to the navigation servitude.

7. PROJECT MAP

8. INDUCED FLOODING

It has been determined that project implementation will cause an increase in duration in the water elevations on lands south of Tamiami Trail, located in the Everglades National Park Expansion Area, being acquired in fee by the National Park Service and on lands owned by the Airboat Association of Florida. As set forth in the Real Estate Design Memorandum dated March 1991, a perpetual flowage easement will be acquired by the Government over the lands owned by the Airboat Association of Florida.

9. REAL ESTATE BASELINE COST ESTIMATE

Real Estate costs are administrative costs for the relocation of the portion of Tamiami Trail. Costs are included to cover the costs associated with negotiation of agreement with Florida Department of Transportation.

Lands and Damages:	$ 850,000
Total Lands and Damages (Rounded):	$ 850,000
Acquisition/Administrative Costs	
Federal	$ 83,000
Non-Federal	6,000
Public Law 91-646 Payments	$ 100,000
Contingencies (25%) Rounded	$ 260,000
Total Estimates Real Estate Costs (Rounded)	$1,299,000

10. RELOCATION ASSISTANCE BENEFITS

The Osceola Camp (Camp), which is located on the south side of the Tamiami Trail some 0.6 miles east of S-333 is located on land which the Department of Interior (DOI), National Park Service has acquired full fee title, as provided by the Everglades National Park Protection and Expansion Act of 1989. The site will be subject to increased water levels under the Modified Water Deliveries Project.

Structures in the Osceola Camp will have to be raised above the Modified Waters Project higher water levels. Interagency Agreement IA-5000-1-9501 makes such provisions. Relocation of the Osceola Camp is outside the scope of the authorized Corps project. The Everglades National Park (NPS) has accepted responsibility and will make all necessary arrangements for relocation or elevation of the Camp.

Relocation costs for the Airboat Association of Florida parcel are estimated at $100,000. No other relocation costs are identified as part of this project. Any relocation costs associated with the lands being purchased by DOI have previously been authorized.

11. MINERALS

No known minerals exist in the project area.

12. NON-FEDERAL SPONSOR'S AUTHORITY TO PARTICIPATE.

The South Florida Water Management District is the non-Federal Sponsor for this project. The South Florida Water Management District was created by virtue of Florida Statutes, Chapter 373, Section .069. The South Florida Water Management District was created to further the State policy of flood damage prevention, preserve natural resources of the State including fish and wildlife and to assist in maintaining the navigability of rivers and harbors. (There are other enumerated purposes but they are not directly applicable to this project.) The South Florida Water Management District is specifically empowered to

> *Cooperate with the United States in the manner provided by Congress for flood control, reclamation, conservation, and allied purposes in protecting the inhabitants, the land, and other property within the district from the effects of a surplus or a deficiency of water when the same may be beneficial to the public health, welfare, safety, and utility. (Section 373.103)*

To carry out the above purposes, the South Florida Water Management District is empowered to

...hold, control, and acquire by donation, lease, or purchase, or to condemn any land, public or private, needed for rights-of-way or other purposes, and may remove any building or other obstruction necessary for the construction, maintenance, and operation of the works; and to hold and have full control over the works and rights-of-way of the district.

The term *works of the district* is defined by Section 373.019 to be

...those projects and works, including, but not limited to, structures, impoundments, wells, and other water courses, together with the appurtenant facilities and accompanying lands, which have been officially adopted by the governing board of the district as works of the district.

Section 373.139 specifically empowers the South Florida Water Management District

...to acquire fee title to real property and easements therein by purchase, gift, devise, lease, eminent domain, or otherwise for flood control, water storage, water management, and preservation of wetlands, streams and lakes, except that eminent domain powers which may be used only for acquiring real property for flood control and water storage.

13. REAL ESTATE MILESTONES

All lands required for construction, operation and maintenance of the project are schedule to be purchased by August 2006 to meet the current construction schedule. Contract advertisement is currently scheduled for September 2006.

14. RELOCATIONS OF ROADS, BRIDGES, UTILITIES, TOWNS AND CEMETERIES

A. ROADS

U.S. Highway 41 (Tamiami Trail) will be raised for approximately 10 miles and two bridges constructed between Structures S-334 on the east and S-333 on the west. The purpose is to provide increased conveyance of water from WCA 3B and the L-29 Canal to Northeast Shark River Slough. Based on evidence submitted by the Florida Department of Transportation and independent investigation, the Florida Department of Transportation owns fee title to portions of this area, road easements to portions of the area and prescriptive rights to other portions of the area. The National Park Service is acquiring or owns the underlying fee to those portions not owned in fee by the Florida Department of Transportation. As the Modified Water Deliveries to Everglades National Park

Project is a federal acquisition and construction program, the responsibility for securing the Relocation Contract will be on the Federal government.

B. BRIDGES

None to be relocated.

C. UTILITIES

There are a number of utility companies that have their facilities located in the State owned right of way for U.S. Highway 41 (SR90, Tamiami Trail). These consist of electric, telephone and fiber optic cables.

The work on the Tamiami Trail will involve raising the roadbed and the construction of bridges. The work will impact all the utility facilities in the highway right of way necessitating their relocation.

The Florida Department of Transportation has issued permits to the various utilities to allow placement of their facilities within the right-of-way. The issue becomes whether under local law this gives the utilities a property right.

Special Use Permits state, “It is expressly stipulated that this permit is a license for permissive use only and that the placing of facilities upon public property pursuant to this permit shall not operate to create a property right.” The permit also provides: “Whenever it is necessary for the construction, repair, improvement, maintenance, safe and efficient operation, alteration or relocation of all, or any portion of said highway as determined by the Director, Division of Maintenance, any or all of said poles, wires, pipes, cables or other facilities and appurtenances authorized hereunder, shall be immediately removed from said highway or reset or relocated thereon as required by the Director, Division of Maintenance, and at the expense of the permittee unless reimbursement is authorized.”

Since the work to be preformed is essentially a road construction project, the Florida Department of Transportation will be asked to invoke the provision of the permit requiring the utilities to relocate their facilities at the utilities cost. Language will be inserted into the Relocation Agreement providing for this action. Assuming that the Florida Department of Transportation invokes this permit condition, the utility companies will have neither a real estate interest in the highway right of way, nor a compensable interest. The costs of the relocations will be the responsibility of the utility companies.

D. TOWNS OR CEMETERIES

No towns or cemeteries will be relocated as a result of this project.

15. PRESENCE OF CONTAMINANTS (HAZARDOUS, TOXIC AND RADIOACTIVE WASTES)

A preliminary assessment for hazardous, toxic and radioactive waste (HTRW) was performed by the Jacksonville District. Preliminary assessment indicated that in general, no evidence of HTRW exists within the project area.

16. ATTITUDE OF LANDOWNERS

The lands impacted by this project are owned by the South Florida Water Management District, Florida Department of Transportation and Everglades National Park who strongly support the project.

Attitude of private landowners????

17. M-CACES

REAL ESTATE CHART OF ACCOUNTS

ESTIMATED PROJECT REAL ESTATE COSTS
PROJECT: MWD Tamiami Trail Preliminary Values for ALL Alternatives
DATE: 31 May 05

01	LANDS AND DAMAGES		
01AA	PROJECT PLANNING		$20,000
01B--	ACQUISITIONS		
01B20	BY LOCAL SPONSOR (LS)		$0
01B40	BY GOVT		$5,000
	RELO CONTRACTS		$10,000
01C--	CONDEMNATIONS		
01C20	BY LS		$0
01C40	BY GOVT		$22,000
01E--	APPRAISALS		
01E30	BY LS		$0
01E50	BY GOVT		$10,000
01F--	PL 91-646 ASSISTANCE		
01F20	BY LS	$0	
01F40	GY GOVT		$11,000
01G--	TEMPORARY PERMITS/LICENCES/RIGHTS-OF-ENTRY		
01G20	BY LS		$6,000
01G40	BY GOVT		$3,000
01G60	DAMAGE CLAIMS		
	PROJECTED RELATED		
01M00	ASMINISTRATION		
	REAL ESTATE REVIEW OF PCA		$2,000
01R--	REAL ESTATE PAYMENTS		
01R1	LAND PAYMENTS		
01R1B	BY GOVT		$850,000
01R2	PL 91-646 ASSISTANCE PAYMENTS		
01R2B	BY GOVT		$100,000

TOTAL REAL ESTATE COST EXCLUDING CONTINGENCY (RD)		**$1,039,000**
REAL ESTATE CONTINGENCY (25%) COST (RD)	**$260,000**	
TOTAL PROJECT REAL ESTATE COST (RD)		**$1,299,000**

Appendix I

SECTION 404(b)(1) EVALUATION REPORT

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SECTION 404(b)(1) EVALUATION REPORT

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CENTRAL AND SOUTHERN FLORIDA STUDY
MODIFIED WATERS DELIVERY TO THE
EVERGLADES NATIONAL PARK

PROPOSED IMPROVEMENTS TO THE TAMIAMI TRAIL
DADE COUNTY, FLORIDA

1.0 PROJECT DESCRIPTION

1.1 LOCATION

The proposed work will be performed in the western-central portion of Miami-Dade County, Florida (Figure 1). The potentially impacted local areas flank the south side of the existing U.S. Highway 41 commonly called the Tamiami (Tampa to Miami) Trail. The Tamiami Trail, the L-29 Canal, and particularly the L-29 levee on the north side of the canal, form the southern boundary of the South Florida Water Management District's (SFWMD) Water Conservation Area 3B (WCA-3B). The south side of the project area is bounded by the Everglades National Park (ENP).

The limits of the proposed project begin slightly more than one mile west of the intersection of Krome Avenue and Tamiami Trail and extend approximately 10.7 miles to the west. The L-29 Canal, also known as the Tamiami Canal, runs along the north side of the Tamiami Trail through this area. The project limits are more definitively marked at each end by two water-control structures across the canal, S-334 on the east and S-333 on the west.

1.2 GENERAL DESCRIPTION

1.2.1 Existing Conditions

Under the current authorized and approved plan Modified Waters Delivery (MWD) Plan, water would be transferred from WCA-3A to WCA-3B by constructing three new water control structures at Levee L-67A and three new water control structures at L-67C. Water would be passed from WCA-3B through S-355A and S-355B to the L-29 Canal and through the existing culvert system under the Tamiami Trail into Northeast Shark River Slough (NESS) of ENP. When the General Design Memorandum (GDM) was completed in 1992, it was believed that existing culverts under the roadway would be adequate to convey the flow of water. Subsequent hydrological analyses, however, revealed that the head height in the L-29 Canal required for the culverts to convey the increased water could adversely affect the structure of Tamiami Trail and overtop the highway under certain conditions.

1.3 AUTHORITY/PURPOSE

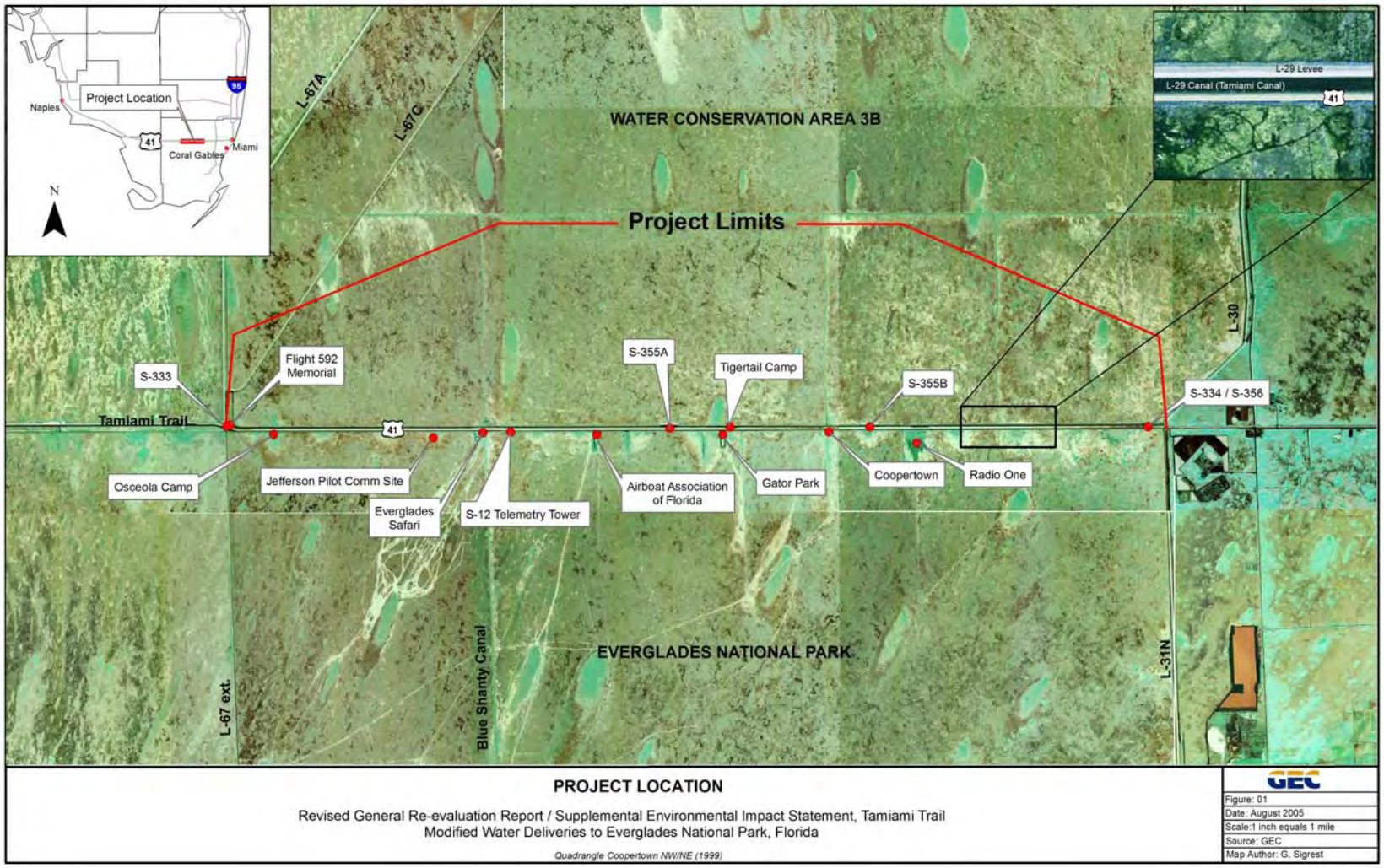
The Everglades National Park Protection and Expansion Act (Public Law [PL] 101-229, Section 104, 16 U.S.C. Part 410r-5 *et seq*.), December 1989, authorized the Secretary of the Army to undertake certain actions to improve water deliveries to the ENP and to take steps to restore natural hydrologic conditions. This Act provides the underlying authority for this project. Section 104 of the Act stated:

> *The Everglades National Park is a nationally and internationally significant resource and the park has been adversely affected and continues to be adversely affected by external factors which have altered the ecosystem including the natural hydrologic conditions within the park. Wildlife resources and their associated habitats have been adversely impacted by the alteration of natural hydrologic conditions within the park, which has contributed to an overall decline in fishery resources and a 90 percent population loss of wading birds.*

The Act also provided direction for the U.S. Army Corps of Engineers (USACE) to initiate corrective actions to alleviate deterioration in natural resources of ENP attributed to changes in water conditions associated with construction of the Central and Southern Florida (C&SF) water management system. The Act stated:

> *Upon completion of a final report by the Chief of the Army Corps of Engineers, the Secretary of the Army, in consultation with the Secretary, is authorized and directed to construct modifications to the Central and Southern Florida Project to improve water deliveries into the park and shall, to the extent practicable, take steps to restore the natural hydrological conditions within the park.*

Such modifications shall be based upon the findings of the Secretary's experimental program authorized in Section 1302 of the 1984 Supplemental Appropriations Act (97 Stat. 1292) and generally as set forth in a General Design Memorandum to be prepared by the Jacksonville District entitled Modified Water Deliveries to Everglades National Park*. The Draft of such Memorandum and the Final Memorandum, as prepared by the Jacksonville District, shall be submitted as promptly as practicable to the Committee on Energy and Natural Resources and the Committee on Environment and Public Works of the United States Senate and the Committee on Natural Resources and the Committee on Public Works and Transportation of the United States House of Representatives.*



PROJECT LOCATION

Revised General Re-evaluation Report / Supplemental Environmental Impact Statement, Tamiami Trail
Modified Water Deliveries to Everglades National Park, Florida

Quadrangle Coopertown NW/NE (1999)

GEC
Figure: 01
Date: August 2005
Scale:1 inch equals 1 mile
Source: GEC
Map Author: G. Sigrest

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The GDM called for in the Act was completed in June 1992. This GDM and its associated Environmental Impact Statement (EIS) for Modified Water Deliveries to ENP is the authorizing document for structural modifications and additions to the existing C&SF Project required for the modification of water deliveries for ecosystem restoration in the ENP. The 1992 GDM stated,

> The future without project condition will lead to the further deterioration of unique and outstanding ecological resources of the Everglades that are recognized and valued throughout the world. Therefore, based on the direction provided in the Everglades National Park Protection and Expansion Act of 1989, the goal is to restore natural hydrologic conditions in the Park to the extent practicable. Meeting this goal will lead to improvements in the abundance, diversity and ecological integrity of native plants and animals in the Park.

Section 528 of the Water Resources Development Act enacted October 1996 (Public Law [PL] 102-580) was entitled "Everglades and South Florida Ecosystem Restoration." This authorized a number of ecosystem restoration studies, now collectively known as the Comprehensive Everglades Restoration Plan (CERP). As a result of this Act, the USACE submitted a report to Congress on July 1, 1999, containing a comprehensive blueprint for Everglades restoration. Implementation of CERP will further increase the flow of water entering NESS. The plan has subsequently been approved as the Water Resources and Development Act of 2000.

1.3.1 Alternatives

The proposed plan calls for identifying a technical solution to provide modifications to the Tamiami Trail culvert system that would allow for the unimpeded conveyance of water from WCA-3B and the L-29 Canal north of the Tamiami Trail to NESS and the ENP south of the Tamiami Trail, as provided by the 1992 GDM.

A preliminary array of 13 alternatives was developed and evaluated by a multidisciplinary team with expertise in hydraulics/hydrology, geotechnical engineering, planning procedures, and project management/project implementation. In 2003 a General Reevaluation Report/Supplemental EIS (GRR/SEIS) was prepared in order to supplement the 1992 GDM/Final EIS. The 2003 report retained six of the 13 preliminary alternatives for further evaluation, and two additional alternatives were identified through public and interagency input.

The 2005 Revised GRR/SEIS (RGRR/SEIS) selected ten alternatives, including the no-action alternative, for detailed engineering evaluation and comparative analysis. The nine action alternatives all include bridge construction and reconstruction of the remaining highway, with differences being in the lengths and locations of the bridges.

Each action-alternative consists of removing a portion of the highway and embankment, at varied lengths and locations, and of constructing a bridge to replace the removed section of road and maintain motor vehicle traffic. The remaining sections of Tamiami Trail would be reconstructed to raise the elevation to the minimum required based on the design high water elevation and on the roadway cross section geometry dictated by Florida Department of Transportation (FDOT) standards. The proposed bridge(s) would be constructed to the south of the existing Tamiami Trail.

Alternative 9, 3,000-Foot Bridge. Alternative 9 would involve creating an approximately 3,000-foot-wide conveyance channel through Tamiami Trail by removing a 3,000-foot length of the highway and embankment between the Blue Shanty Canal and the Airboat Association of Florida site.

Alternative 10, Four-Mile Bridge (Central). Alternative 10 involves creating an approximately four-mile wide conveyance channel through Tamiami Trail by removing a four-mile length of the highway and embankment from a point approximately one-mile east of the Osceola Camp to a point just west of the Tigertail Camp.

Alternative 11, Four-Mile Bridge (East). Alternative 11 involves creating an approximately four-mile wide conveyance channel through Tamiami Trail by removing a four-mile length of the highway and embankment from just east of Coopertown to a point approximately 200-300 feet west of the water control structure S-334.

Alternative 12, Three-Mile Bridge. Alternative 12 would involve creating a conveyance channel of up to three miles in length by removing a three-mile long portion of the highway and embankment from a point one-half mile east of the Osceola Camp to a point 1,500 feet west of the Airboat Association of Florida.

Alternative 13, Two-Mile Bridge. Alternative 13 would involve creating an approximately two mile-wide conveyance channel by removing a two-mile length of the highway and embankment from a point one-half mile east of the Osceola Camp to a point 1,300 feet west of the S-12 Telemetry Tower.

Alternative 14, Two-Mile Bridge West and One-Mile Bridge East. Alternative 14 would involve creating two conveyance channels of up to three miles in length by removing a two-mile long portion of the highway and embankment from a point one-half mile east of the Osceola Camp to a point 1,200 feet west of the S-12 Telemetry Tower as well as a one-mile length of highway and embankment from a point 3,000 feet east of the Radio One site to a point one mile west of S-334.

Alternative 15, 1.3-Mile Bridge West and 0.7-Mile Bridge East. Alternative 15 involves creating two conveyance channels of up to two miles in length by removing a 1.3-mile length of the highway and embankment from a point 4,500 feet east of Osceola Camp to a point 1,300 feet west of Everglades Safari as well as a 0.7-mile length of highway and embankment from a point 4,500 feet east of the Radio One site to a point one mile west of S-334.

Alternative 16, Three 3,000-Foot Bridges. Alternative 16 would involve creating three conveyance channels of up to 9,000 feet in length by removing three 3,000-foot sections of the highway and embankment. The western bridge would extend from a point 4,500 feet east of the Osceola Camp to a point 2,000 feet west of the Jefferson Pilot Communication Site. The central bridge would extend from a point just east of the Airboat Association to a point 1,300 feet west of S-355A. The eastern bridge would extend from a point 6,000 feet east of the Radio One site to a point one mile west of S-334.

Alternative 17, Ten-Mile Bridge. Alternative 17 would involve creating an approximately 10-mile-wide conveyance channel through Tamiami Trail by removing a 10-mile length of the highway and embankment between the S-333 water control structure at the western terminus of the project and the S-334 water control structure at the eastern terminus of the project.

1.3.2 Tentatively Selected Plan

The tentatively selected plan is Alternative 14 which would construct two bridges along the Tamiami Trail, a two-mile bridge in the western portion of the project and a one-mile bridge in the eastern portion of the project (Figure 2). The bridges would satisfy current FDOT standards and be uniform throughout its entire length. The section is expected to include two 12-foot-wide travel lanes, two eight-foot-wide shoulders, and safety barriers. The lower limit of the bridge superstructure would be based on vertical clearance requirements for exposure and maintenance considerations. This elevation is expected to be 14.75 feet NGVD 1929, based on 8.75-foot water control elevation plus six (6) feet. The bridges would be offset the existing centerline by approximately 50 feet to the south. This offset is necessitated by construction requirements.

The approximately eight (8) miles of remaining highway embankment would be reconstructed to raise the Profile Grade Line (PGL) (crown elevation) to the minimum required based on the design high water (DHW) elevation of 9.7 feet and on the roadway cross section geometry dictated by FDOT standards. The PGL elevation is expected to be EL 12.3 feet. The existing roadway, both asphalt and base material, would be reused to the extent practical in accordance with roadway construction practice. In order to meet FDOT criteria for stable slopes, the roadway width would increase, and additional right-of-way would be required. The width of the encroachment, south into ENP, would vary.

The maintenance of traffic and construction sequence for the bridge and roadway would be the best balance of traffic safety, environmental impacts, and construction cost and duration.

Access facilities, such as ramps to the bridge or elevated roadway, would be provided for Everglades Safari and the Jefferson Pilot Communications site.

1.3.3 Summary of Mitigation Features Incorporated into the Tentatively Selected Plan

A “mitigation feature” is a management procedure, activity, or technique to reduce the severity of environmental impacts and/or offset impacts associated with a project.

In the development of alternative plans, including the tentatively selected plan, features that were incorporated to avoid, minimize, and compensate for potential adverse environmental effects include the removal of embankment where the bridges would be constructed. This allows for the restoration of wetland habitat in that section of the roadway to be degraded. Additionally, the removal of embankment would facilitate the restoration of sheet flow from the L-29 Canal southward into ENP. Therefore, the project offers far greater benefits to wetland habitat than it will adversely impact.

This project is part of a larger effort intended to provide ecological enhancement to many thousands of wetland acres through the hydrologic restoration of ENP, to the extent practicable. Therefore, this project can be considered self-mitigating. The loss of wetland habitat associated with project construction would be fully compensated by the project benefits.

Best Management Practices (BMPs) would be employed during construction activities in order to minimize erosion and control sediment transport off-site.

Two wood stork (*Mycteria americana*) rookeries exist near the project area, and restrictions would be emplaced during construction to minimize impacts.

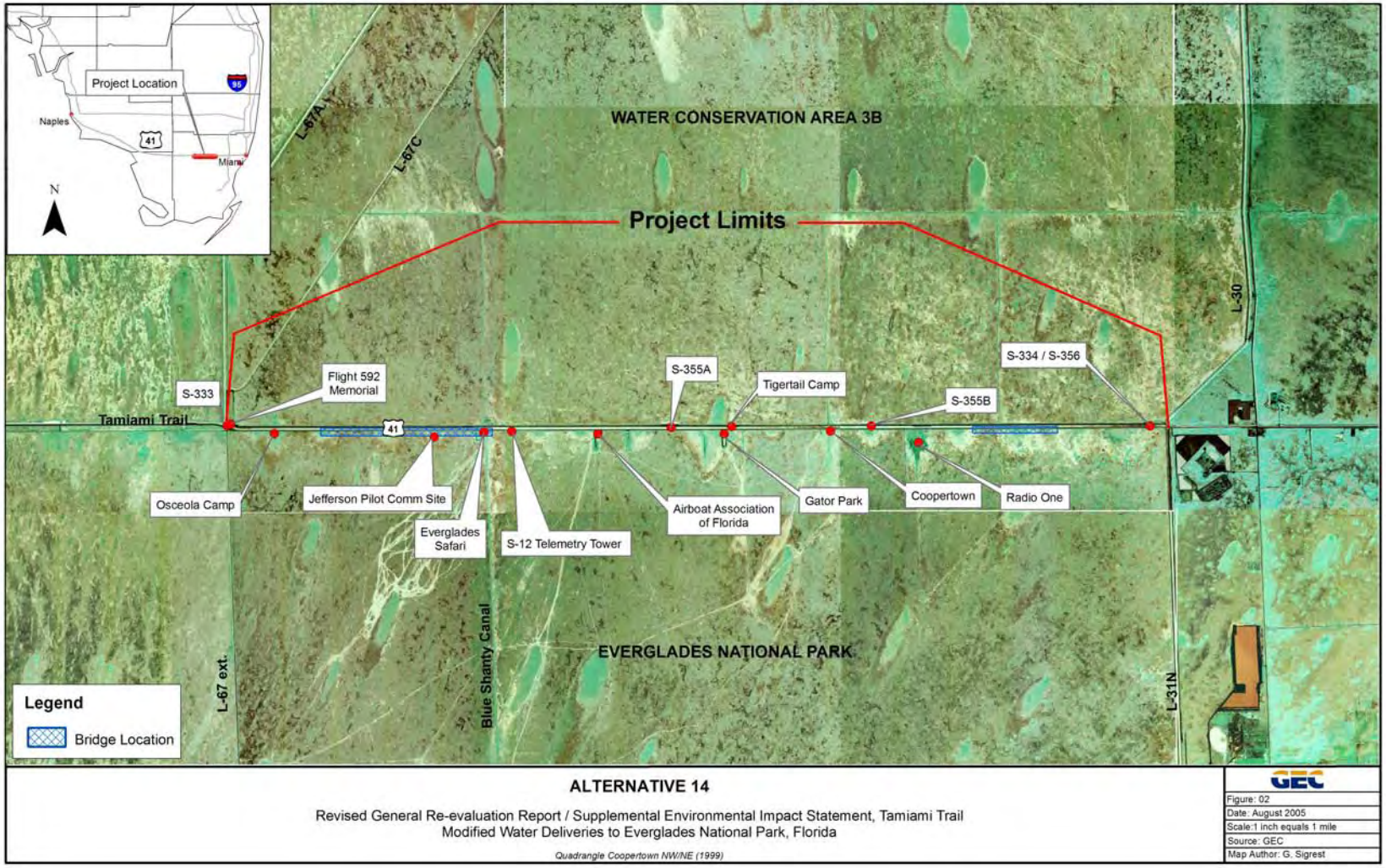
Although not part of the project purpose, features such as wildlife crossings and airboat crossings may be funded and incorporated as enhancements or betterments to the project or be included in a later project.

Lastly, the project has incorporated features to minimize impacts to local area businesses and existing facilities along Tamiami Trail. Access from the western bridge will be provided to existing facilities such as Jefferson Pilot and Everglades Safari; no access is necessary to or from the eastern bridge.

1.4 GENERAL DESCRIPTION OF DREDGED AND FILL MATERIAL

1.4.1 General Characteristics

Fill material will be composed of A-1 and A-3 select material, in accordance with FDOT Standard Indices 500 and 505. A four-inch drainage layer of No. 8 sieve material would be provided.


Project Location
Naples
Miami
41
95
N
WATER CONSERVATION AREA 3B
L-67A
L-67C
Project Limits
L-30
S-333
Flight 592 Memorial
Tamiami Trail
41
S-355A
Tigertail Camp
S-355B
S-334 / S-356
Osceola Camp
Jefferson Pilot Comm Site
Everglades Safari
S-12 Telemetry Tower
Airboat Association of Florida
Gator Park
Coopertown
Radio One
EVERGLADES NATIONAL PARK
Blue Shanty Canal
L-67 ext.
L-31N
Legend
Bridge Location
ALTERNATIVE 14
Revised General Re-evaluation Report / Supplemental Environmental Impact Statement, Tamiami Trail
Modified Water Deliveries to Everglades National Park, Florida
Quadrangle Coopertown NW/NE (1999)
GEC
Figure: 02
Date: August 2005
Scale:1 inch equals 1 mile
Source: GEC
Map Author: G. Sigrest

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1.4.2 Quantity of Material

The placement of additional fill is necessitated by the increase in grade of the roadway. The increased grade dictates the enlarged footprint in order to meet current FDOT standards for roadway typical section and stable side slopes. The encroachment southward into ENP will range from three to 22 feet where the roadway will be elevated. In addition, the bridge centerline will be shifted 50 feet to the south of the existing centerline in order to allow for the necessary space requirements during construction. The increased footprint from the roadway amounts to approximately 12.1 acres impacted while the construction of the bridge approaches would impact approximately 9.8 acres.

1.5 DESCRIPTION OF PROPOSED DISCHARGE SITES

1.5.1 Location and Size

The location of the proposed activity is a 10.7 mile extent of the Tamiami Trail west of Krome Avenue in central Miami-Dade County. The tentatively selected plan involves creating an approximately three-mile-wide cumulative conveyance channel through Tamiami Trail by removing a two-mile western portion and one-mile eastern portion of highway and embankment. Two bridges would be constructed over the opening to replace the removed section of road and maintain motor vehicle traffic across the opening. In order to provide the required space clearance for construction of the bridge, the bridge would be constructed approximately 50 feet to the south of the existing alignment. The approximately eight miles of remaining highway would be reconstructed to raise the Profile Grade Line (crown elevation) to the minimum required based on the Design High Water and the roadway cross section geometry. In order to meet FDOT criteria for stable side slopes, the roadway width would increase, and additional right-of-way will be required to the south of the existing highway. The placement of additional fill on the south side of Tamiami Trail and for bridge approach structures is estimated to impact approximately 21.9 acres.

1.5.2 Type of Site/Habitat

The site is located on the Tamiami Trail, a paved asphaltic roadway with a typical section of two 12-foot travel lanes, an 8-foot-wide shoulder on each side of the roadway, and a guardrail at each edge of the shoulder.

The type of habitat adjacent to the existing Tamiami Trail includes long and short hydroperiod wetlands as well as an abundance of interspersed willowheads, bayheads, and hardwood hammocks. Sawgrass (*Cladium jamaicense*) communities dominate the long hydroperiod wetlands while muhly grass (*Muhlenbergia capillaris*) and black sedge (*Schoenus nigricans*) dominate the short period wetlands mostly influenced by NESS and local rainfall.

There are four herbaceous wetland cover types present in the Everglades: (1) sloughs with deep, permanent water levels, (2) sawgrass marshes with semi-permanent water levels and long hydroperiods, (3) wet peat prairies, and (4) wet marl prairies with shorter hydroperiods. The wetland cover types are differentiated by the average flooding depth and duration and by their predominant plant cover.

The dominant species of vegetation along the south side of Tamiami Trail is the invasive exotic species, the Brazilian pepper (*Schinus terebenthifolius*). The Brazilian pepper forms a corridor of 10-30 feet wide.

1.5.3 Timing and Duration of Discharge

Construction of the project is anticipated to begin at the beginning of 2007 and is expected to require 33 months to complete.

1.6 DESCRIPTION OF DISPOSAL METHODS

The recommended plan, Alternative 14, involves the placement of fill on the south side of the Tamiami Trail. The encroachment into ENP on the south side of the roadway varies from three (3) feet along the portions of the highway to remain in place to 50 feet where transitions from the roadway to the bridge will be constructed. Alternative 14 also involves the removal of approximately three miles of existing highway and embankment where traffic would be served by the bridges. The fill material would be disposed of approximately 15-20 feet south of the project area in the C-111 Basin (Rocky Glades), which is owned by SFWMD. The material would be stockpiled north of the 8.5 Square Mile Area (8.5 SMA) and west of the Flow Way (Figure 3). Selected quantities of soils and organic peat may be evaluated for placement in the nearby Broward Water Preserve Area. Excavated fill may also be evaluated for backfilling the levee for the L-67 Extension project, where up to 50,000 cubic yards of material could be needed.

2.0 FACTUAL DETERMINATIONS

2.1 PHYSICAL SUBSTRATE DETERMINATIONS

2.1.1 Substrate Elevation and Slope

The elevation ranges from 9.8 feet, National Geodetic Vertical Datum (NGVD) 1929 to 10.1 feet NGVD, with very little slope.

2.1.2 Sediment Type

Sediment is nearly level and poorly drained, consisting of organic material eight to more than 51 inches deep. The black to dark brown muck is underlain by soft, porous limestone.

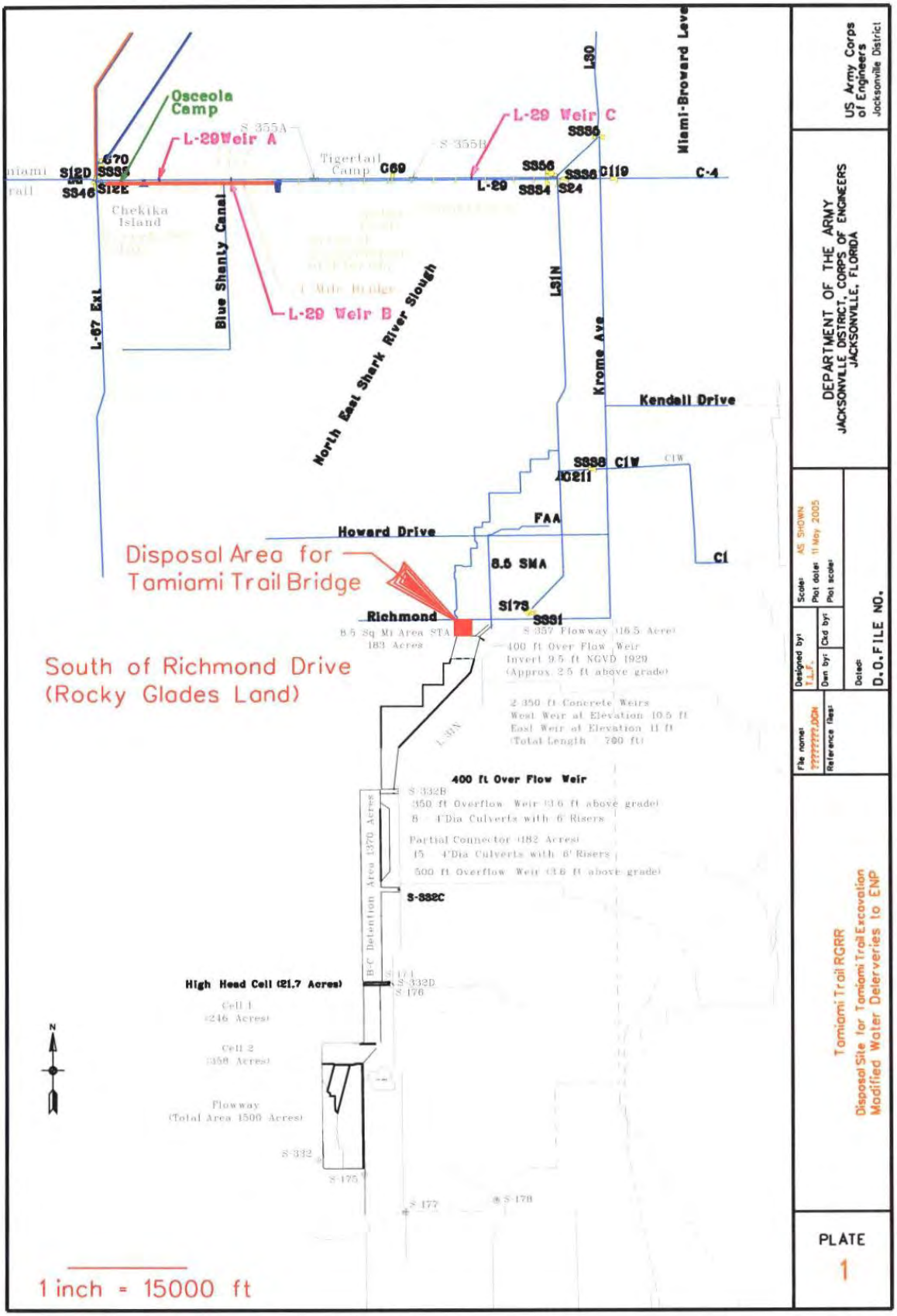

Figure 3. Embankment Disposal Site Location

2.1.3 Dredged and Fill Material Movement

The proposed action does not involve the movement of dredged material. However, fill material will both be added and removed. Where the existing highway will remain, additional fill will be emplaced in order to raise the road to a crown elevation of 12.3 feet NGVD from the average 10.0 feet NGVD. The increase in crown elevation necessitates an increase in the base of the highway in order to meet FDOT standards. Therefore, the footprint of Tamiami Trail will increase to the south into ENP.

Where the transition to the new bridge would be constructed, the existing embankment and muck would be removed to bedrock, and a new embankment of A-1 and A-3 material will be built. Fill material will consist of A-1 and A-3 select material in accordance with FDOT Standard Indices 500 and 505. The new bridge would be constructed approximately 50 feet to the south of the existing highway, using Florida Bulb Tee (FBT) 72 Beams with a composite cast-in-place concrete deck. This superstructure will be supported on pile bents using 24 inch square pre-cast, pre-stressed concrete piles.

The encroachment into ENP will impact approximately 21.9 acres; the area under the new bridges consists of approximately 17.1 acres. The existing highway to be replaced by the new bridge would be removed. The removed embankment, constituting approximately 27.3 acres, will be deposited off-site.

2.1.4 Physical Effects on Substrate

With the addition of 21.9 acres of fill material on the south side of Tamiami Trail, the wetland habitat adjacent to the south side of the highway will cease to function as such. On the transitions to the bridge, the existing embankment and muck will be removed to bedrock for the emplacement of A-1 and A-3 select material.

The portion of roadway to be bridged will have the existing fill, approximately 27.3 acres, removed. The exotic vegetation that exists in a corridor approximately 10 to 30 feet wide along the south side of Tamiami Trail would be removed.

Through project implementation, the distribution of flows would occur more evenly through the three-mile conveyance channel created by the bridges and through the remaining culverts under the improved roadway. The restoration of water deliveries would enable the restoration in ENP of vegetative communities by enabling the shift to open water, spikerush marsh and slough communities, by reducing the risk of ridge and tree island peat burning and by minimizing the invasion of exotic woody plant species.

2.1.5 Other Effects

No change in the general type of substrate is expected because the adjacent area is in public lands with WCA-3B to the north and ENP to the south side of Tamiami Trail. The quality of the substrate will be improved through project implementation.

2.1.6 Actions Taken to Minimize Impacts

The recommended plan incorporates actions to avoid and minimize impacts to aquatic communities. See Section 1.3.3, *Summary of Mitigation Features Incorporated into the Tentatively Selected Plan.*

2.2 WATER CIRCULATION, FLUCTUATION, AND SALINITY DETERMINATION

2.2.1 Water Quality

Existing water quality in the Everglades is greatly influenced by both urban and agricultural development-related activities of south Florida. The primary constituents of concern in ENP include nutrients, dissolved oxygen (DO), mercury, biochemical oxygen demand (BOD), and coliforms. In WCA-3B the constituents of concern are total phosphorus, DO, conductivity, mercury, and nitrite/nitrate nitrogen. Canals bordering the WCAs generally have very low DO levels typical of marsh waters.

Highway runoff potentially introduces contaminants such as metals, fuels, lubricants, combustion products, and toxic chemicals. Based on the low traffic volume along Tamiami Trail (5,200 vehicles per day), it can be inferred that the introduction of pollutants due to highway runoff is minimal.

The bridge will be constructed with a pollution abatement system that will collect stormwater runoff from the bridge only.

2.2.1.1 Salinity

Not applicable.

2.2.1.2 Water Chemistry

The potential increase in sediment transport during construction would be minimized through the implementation of BMPs. Nutrient levels in the project area may increase slightly from sediment disturbing activities. No significant long-term increases in these conditions are expected as a result of the project.

The long-term water quality in ENP would not be affected by the proposed project.

2.2.1.3 Clarity

Turbidity may increase during construction, but would revert to pre-construction conditions once implementation of the project is complete.

2.2.1.4 Color

No expected change.

2.2.1.5 Odor

The soils in the project area contain thick layers of organic material from eight to 51 inches thick. The exposure of the muck may release odors; however, these fumes are not noxious.

An investigation of hazardous, toxic, and radioactive waste (HTRW) was performed for the project area. While no evidence of HTRW exists, the potential always exists that contaminants previously unknown to be present could be disturbed or released by removing unnatural structures from the landscape. If contaminants are found during construction through visual or olfactory means, the site would be remediated before construction recommences.

2.2.1.6 Taste

Not applicable.

2.2.1.7 Dissolved Gas Levels

The release of organic materials from sediments may slightly increase BOD, and the release of reduced materials may slightly increase chemical oxygen demand (COD), both of which would have the effect of lowering dissolved oxygen concentrations in the ecosystem. These impacts would be temporary, limited only to the time of construction and soil-disturbing activities.

2.2.1.8 Nutrients

Nutrient levels in the project area may increase slightly from sediment disturbing activities. This impact would be temporary, during construction activities only. No long-term change in nutrient concentrations would occur from implementation of the project.

2.2.1.9 Eutrophication

Not applicable.

2.2.2 Current Patterns and Circulation

2.2.2.1 Current Patterns and Flow

Implementation of the tentatively selected plan would have beneficial effects on the current pattern and flow of waters in the project area. Modifications to Tamiami Trail will provide the capacity for the design high water (DHW) of 9.7 feet in the L-29 Canal. The distribution of flows would occur through two conveyance channels totaling three miles wide and through the remaining existing culverts.

2.2.2.2 Velocity

The existing culvert system concentrates flows from L-29 Canal under Tamiami Trail through localized points. Flow velocity has been a concern.

The project would reduce high flow velocity discharges beyond that of the no-action alternative. Rather than concentrating flows under Tamiami Trail at the existing 55 culverts, flows would be more evenly distributed through the conveyance channels. Additionally, Alternative 14 would minimize the difference between the average velocity of flows at the road and those in the ENP marsh.

2.2.2.3 Stratification

The project would have a beneficial impact on stratification in the project vicinity. Instead of concentrating sediment flows through the system of existing culverts, the three-mile-wide conveyance channel would enable that flow to be more evenly distributed over a two-mile wide corridor in the west and a one-mile corridor in the east.

2.2.2.4 Hydrologic Regime

The hydrologic regime in south Florida has been drastically altered in the last hundred years through development of urban areas, agricultural practices, and the construction of systems of canals and levees. Rather than conveying sheet flow over a vast expanse of Everglades, south Florida has become decompartmentalized, and flow has been concentrated through canals.

The implementation of the project would assist in the restoration of water deliveries to ENP. In turn, the natural ridge and slough processes would be restored.

2.2.3 Normal Water Level Fluctuations

Water levels fluctuate during the year. The wet season in south Florida extends from May to September when there exists a higher than average incident of rainfall. The dry season lasts from October through April.

Currently, WCA-3B helps to maintain water levels in ENP, serving as storage for runoff during the wet season for use during the dry season. Water releases into ENP are only allowed when the minimum water level is achieved.

The proposed project will provide for the DHW of 9.7 feet in the L-29 Canal which is required by MWD. By allowing for a higher design stage, the deep sloughs of ENP are capable of maintaining water storage potentially year-round, except during extremely dry years.

2.2.4 Salinity Gradients

Not applicable.

2.2.5 Actions That Will be Taken to Minimize Impacts

The recommended plan incorporates actions to restore water circulation and fluctuations in NESS. See Section 1.3.3, *Summary of Mitigation Features Incorporated into the Recommended Pla*n.

2.3 SUSPENDED PARTICULATE/TURBIDITY DETERMINATIONS

2.3.1 Expected Changes in Suspended Particulates and Turbidity Levels in Vicinity of Disposal Sites

No changes in suspended particulates and turbidity levels are expected in the vicinity of the disposal site.

2.3.2 Effects on Chemical and Physical Properties of the Water Column

2.3.2.1 Light Penetration

Sediments released during construction operations may periodically reduce light penetration. Photosynthesis and primary productivity in portions of the affected areas is not expected to decrease because light attenuation from very briefly suspended particulates would be negligible.

2.3.2.2 Dissolved Oxygen

Effects on BOD and COD levels are expected to be minimal.

2.3.2.3 Toxic Metals and Organics

No anticipated increase in toxic metals and organics exists.

2.3.2.4 Pathogens

This project would have no effect on pathogens.

2.3.2.5 Aesthetics

Implementation of the project would beneficially impact the aesthetics of the area, as exotic vegetation would be removed along the highway and the bridges would offer an expansive view of the Everglades.

2.3.3 Effects on Biota

2.3.3.1 Primary Production

Photosynthesis and primary productivity in portions of the affected areas is not expected to decrease because light attenuation from very briefly suspended particulates would be negligible. As these particulates settle, primary production would return to pre-project levels.

2.3.3.2 Suspension/Filter Feeders

No impact to suspension/filter feeders is anticipated.

2.3.3.3 Sight Feeders

No impact to sight feeders is anticipated.

2.3.4 Actions Taken to Minimize Impacts

The recommended plan incorporates actions to avoid and minimize impacts to aquatic communities. See Section 1.3.3, *Summary of Mitigation Features Incorporated into the Recommended Plan.* Aquatic communities are expected to benefit from the project.

2.4 CONTAMINANT DETERMINATIONS

An investigation of HTRW was performed for the project area. While no evidence of HTRW exists, the potential always exists that contaminants previously unknown to be present could be disturbed or released by removing unnatural structures from the landscape. If contaminants are found during construction through visual or olfactory means, the site would be remediated before construction re-commenced.

2.5 AQUATIC ECOSYSTEM AND ORGANISM DETERMINATION

2.5.1 Plankton

No major changes in the plankton communities are anticipated as a direct result of the project.

2.5.2 Benthos

No impacts to the benthic community are anticipated.

2.5.3 Nekton

Impacts to nekton from implementation of the project are anticipated to be beneficial. During construction, elevated sediment levels during fill removal may occur; however,

these impacts would be constructed related. Once construction is complete, improved water flow and distribution from WCA-3B and the L-29 Canal through Tamiami Trail to ENP would improve conditions and increase the total abundance of fishes in ENP.

2.5.4 Aquatic Food Web

The aquatic food web would not be adversely impacted from the project.

2.5.5 Special Aquatic Sites Effects

2.5.5.1 Sanctuaries and Refuges

WCA-3B managed by the Florida Fish and Wildlife Conservation Commission (FWC) as the Francis S. Taylor Wildlife Management Area is located north of the project area, and ENP and NESS are located south of the project area. No excavated material would be placed within WCA-3B; however, encroachment of the highway to the south will be necessitated in order to meet current FDOT highway construction standards.

2.5.5.2 Wetlands

Effects of the project were examined, and impacts associated with the tentatively selected plan are presented in Table 1. Additional wetland benefits would be realized through restoration of water deliveries to ENP, ridge and slough processes and vegetative communities.

Table 1. Approximate Impacts to Wetlands

Tentatively Selected Plan	Wetland Gain / (Loss) (acres)		Wetland (Loss) from Raising Road Elevation (acres)	Wetland (Loss) from Constructing Approaches (acres)	Net Wetland Gain / (Loss) from Project (acres)
	Area Under Bridge	Area of Roadway Removed			
Alt 14. 2-Mile Bridge & 1-Mile Bridge	(17.1)	27.3	(12.1)	(9.8)	(11.8)

Source: PBS&J and G.E.C., Inc. (2005)

2.5.5.4 Vegetated Shallows

Historically, the area was predominantly ridge and slough habitat, a complex mosaic of marsh assemblages with distinct tree islands. Currently, WCA-3B and ENP are dominated by long and short hydroperiod wetlands with an abundance of interspersed willowheads, bayheads, and hardwood hammocks. Sawgrass (*Cladium jamaicense*) communities dominate the long hydroperiod wetlands while muhly grass (*Muhlenbergia*

capillaris) and black sedge (*Schoenus nigricans*) dominate the short hydroperiod wetlands. Four herbaceous wetland cover types are found in the project area: (1) sloughs with deep, permanent water levels, (2) sawgrass marshes with semi-permanent water levels and long hydroperiods, (3) wet peat prairies, and (4) wet marl prairies with shorter hydroperiods.

The project would help restore water deliveries to ENP and thus restore the quality of vegetative communities south of Tamiami Trail.

2.5.5.5 Coral Reefs

Not applicable.

2.5.5.6 Riffle Pool Complexes

Not applicable.

2.5.6 Threatened and Endangered Species

Six Federally-protected species are known or are potentially encountered in the project area in the 2003 and 2005 Fish and Wildlife Cooridnation Act Report (FWCAR). These include the Cape Sable seaside sparrow (CSSS) (*Ammodramus maritimus mirabilis*), eastern indigo snake (*Drymarchon corais couperi*), Florida panther (*Puma [=Felis] concolor coryi*), snail kite (*Rostrhamus sociabilis*), West Indian manatee (*Trichechus manatus*), and wood stork (*Mycteria americana*). FWC also identified a wading bird rookery just north of the project area across L-29 Canal.

USFWS and FWC did not recommend protective measures or restrictions during construction for the Florida panther, snail kite, West Indian manatee, or the Frog City wading bird rookery. The project was also determined to not preclude compliance with the reasonable and prudent alternatives (RPA) established for conservation of the CSSS through the 1999 USFWS Biological Opinion. Protective measures will be put in place during construction to avoid and minimize impacts to the eastern indigo snake and the wood stork.

After implementation of the project, wildlife mortality in the area is expected to decrease as a result of the three-mile elevated section.

2.5.7 Other Wildlife

The American alligator (*Alligator mississippiensis*) and the Everglades mink (*Mustela vison evergladensis*) were reported in the FWCAR to be present in the area. These species are protected by the State of Florida. After implementation of the project, wildlife mortality in the area is expected to decrease as a result of the four-mile elevated section.

2.5.8 Actions to Minimize Impacts

The recommended plan incorporates actions to avoid and minimize impacts to aquatic communities. See Section 1.3.3, *Summary of Mitigation Features Incorporated into the Recommended Plan*. Although not a part of the project purpose, wildlife crossings can be incorporated into the project as a betterment or enhancement if funded from another source, or the betterment can be included in another project.

2.6 PROPOSED DISPOSAL SITE DETERMINATIONS

2.6.1 Mixing Zone Determination

The sediments to be removed from the project area consist of highway embankment and organic material known to exist within the embankment and which will be removed down to bedrock during the construction of the bridge transition segments. The amount of material scheduled to be removed from the embankment covers approximately 27.3 acres. The fill material will be disposed of 15-20 miles south of the project area in the C-111 Basin (Rocky Glades). The material would be stockpiled north of the 8.5 Square Mile Area (8.5 SMA) and west of the Flow Way. Selected quantities of soils and organic peat may be evaluated for placement in the nearby Broward Water Preserve Area.

2.6.2 Potential Effects on Human Use Characteristics

2.6.2.1 Municipal and Private Water Supply

No adverse effects would occur to municipal or private water supply.

2.6.2.2 Recreational and Commercial Fisheries

Indirect effects of the project on habitat of fishes are discussed in Section 2.5.3, *Nekton.* This project would have no adverse impacts on recreational and commercial fisheries.

2.6.2.3 Water Related Recreation

The project area is used for both consumptive (fishing, hunting, and frogging) and non-consumptive (wildlife viewing, camping, boating, airboating, etc.) recreational use. Access to businesses and other existing facilities would be maintained during and after construction. Bank fishing from the highway would be eliminated in the vicinity of the bridge, but access to the L-29 Canal would be maintained using the L-29 Levee road.

2.6.2.4 Aesthetics

During construction, the aesthetics of the area would be impacted by heavy equipment and construction related activities. However, after construction is completed, a net long-term gain would be realized. Exotic vegetation would be removed from the edge of the highway, and the bridge would offer expansive views of ENP.

2.6.2.5 Parks, National Historic Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves

The project is part of a larger effort to restore ecological values to the Everglades. The implementation of this project would benefit both WCA-3B and ENP.

2.7 DETERMINATION OF CUMULATIVE EFFECTS ON THE AQUATIC ECOSYSTEM

The project would restore hydrologic patterns and ecological connectivity in a portion of the Everglades ecosystem to the extent practicable. It is compatible with future actions to be taken throughout the area of south Florida and minimizes retrofit that would be necessary should future enhancements of Tamiami Trail be undertaken.

2.8 DETERMINATION OF SECONDARY EFFECTS ON THE AQUATIC ECOSYSTEM

All benefits to flora and fauna would be secondary in that the direct effects of the project would be hydrological, but the secondary effects of the project would benefit the ecological components of the region. Both the vegetation and the fish and wildlife resources would be improved upon implementation of Alternative 14.

2.9 ACTIONS TAKEN TO MINIMIZE IMPACTS

The tentatively selected plan incorporates actions to avoid and minimize impacts to aquatic communities. See Section 1.3.3, *Summary of Mitigation Features Incorporated into the Recommended Plan*. The project is designed to benefit aquatic communities.

3.0 FINDINGS OF COMPLIANCE OR NON-COMPLIANCE WITH THE RESTRICTIONS ON DISCHARGE

3.1 ADAPTATION OF THE SECTION 404(b)(1) GUIDELINES TO THIS EVALUATION

No significant adaptations of the guidelines were made relative to this evaluation.

3.2 EVALUATION OF AVAILABILITY OF PRACTICABLE ALTERNATIVES TO THE PROPOSED DISCHARGE SITE THAT WOULD HAVE LESS ADVERSE IMPACT ON THE AQUATIC ECOSYSTEM

Section 5.0 of the RGRR/SEIS, *Formulation of Alternative Plans*, discusses in detail the methodology used to develop and evaluate a wide array of alternatives. No practicable

alternative exists which meets the study objectives that does not involve discharge of fill into waters of the United States.

3.3 COMPLIANCE WITH APPLICABLE STATE WATER QUALITY STANDARDS

The project would not violate any applicable state water quality standards with the possible exception of temporary and negligible increases in turbidity, which might occur during construction. All other standards would be maintained during and following the placement of excavated and fill material.

3.4 COMPLIANCE WITH APPLICABLE TOXIC EFFLUENT STANDARD OR PROHIBITION UNDER SECTION 307 OF THE CLEAN WATER ACT

This project would be in full compliance of Section 307 of the Clean Water Act and would not violate the Toxic Effluent Standards.

3.5 COMPLIANCE WITH THE ENDANGERED SPECIES ACT OF 1973

The proposed project would not harm any threatened or endangered species or their critical habitats. Coordination with USFWS has been maintained throughout the planning process for this project. USFWS comments concerning protected species were addressed in the RGRR/SEIS.

3.6 COMPLIANCE WITH SPECIFIED PROTECTION MEASURES FOR MARINE SANCTUARIES DESIGNATED BY THE MARINE PROTECTION, RESEARCH, AND SANCTUARIES ACT OF 1972

Not Applicable.

3.7 EVALUATION OF EXTENT OF DEGRADATION OF THE WATERS OF THE UNITED STATES

3.7.1 Significant Adverse Effects on Human Health and Welfare

The proposed project would not result in adverse effects on human health and welfare.

3.7.1.1 Municipal and Private Water Supplies

This project would not be located near municipal water supply intakes or private water supplies.

3.7.1.2 Recreational and Commercial Fishing

Recreational bank fishing would be eliminated along the bridges where the highway embankment would be removed; however access to the L-29 Canal would remain from the L-29 Levee which can be accessed from the S-333 or S-334 water control structure.

3.7.1.3 Plankton

This project would not adversely affect plankton.

3.7.1.4 Fish

This project would not adversely affect fisheries resources. The project would on the contrary enhance the total abundance of fishes in ENP based upon the improvement of water distribution and flow through the three-mile-wide conveyance channel, two miles on the west side of the project and one mile on the east side.

3.7.1.5 Shellfish

This project would not adversely affect shellfish.

3.7.1.6 Wildlife

With the incorporation of protective measures for the wood stork and the eastern indigo snake, this project will not impact wildlife in the area. After construction of the bridge is complete, wildlife mortality in the project area is expected to decrease.

3.7.1.7 Special Aquatic Sites

WCA-3B and ENP would not be adversely impacted by the project.

3.7.2 Significant Adverse Effects on Life Stages of Aquatic Life and Other Wildlife Dependent on Aquatic Ecosystems

Significant adverse effects of life stages of aquatic life are not anticipated.

3.7.3 Significant Adverse Effects on Aquatic Ecosystem Diversity, Productivity, and Stability

Significant adverse effects on aquatic ecosystem diversity, productivity, and stability are not anticipated.

3.7.4 Significant Adverse Effects on Recreational, Aesthetic, and Economic Values

The proposed plan would have no adverse impacts on recreational, aesthetic, and economic values.

3.7.5 Appropriate and Practicable Steps Taken to Minimize Potential Adverse Impacts of the Discharge on the Aquatic Ecosystem

The tentatively selected plan incorporates actions to avoid and minimize impacts to aquatic communities. The project is intended to benefit the aquatic ecosystem. See Section 1.3.3*, Summary of Mitigation Features Incorporated into the Recommended Plan.* Among features applicable to the substrate are the removal of highway embankment where the new bridges would be located, the incorporation of best management practices into construction activities, and the implementation of protective measures for the Tamiami East and West Wood Stork colonies.

3.8 COMPLIANCE

Based on the guidelines, the proposed project is specified as complying with the requirements of these guidelines with the inclusion of appropriate and practical conditions to minimize pollution or adverse effects to the affected aquatic ecosystem.

4.0 REFERENCES CITED

U.S. Army Corps of Engineers. 1992. General Design Memorandum and Environmental Impact Statement, Modified Water Deliveries to Everglades National Park. Jacksonville District, U.S. Army Corps of Engineers.

U.S. Army Corps of Engineers. 2003. General Reevaluation Report and Supplemental Environmental Impact Statement for the Tamiami Trail Modifications. Jacksonville District, U.S. Army Corps of Engineers.

U.S. Department of Agriculture, Natural Resources Conservation Service. 1996. Soil Survey of Dade County Area, Florida.

Appendix J

M-CACES

GRR/SEIS Tamiami Trail 2 Bridge
2 BRIDGE ALT.

Designed By: PBS&J
Estimated By: PBS&J

Prepared By: P. Ommi
REVISED: JERRELL PENNINGTON

Preparation Date: 08/10/05
Effective Date of Pricing: 08/10/05
Est Construction Time: 730 Days

Sales Tax: 7.00%

M C A C E S G O L D E D I T I O N
Composer GOLD Software Copyright (c) 1985-2000
by Building Systems Design, Inc.
Release 5.31

Currency in DOLLARS

The basis of this is the pre-final cost estimate for a 4-mile bridge provided by PBS&J under contractract number xxxxx dated 22 July 2005.

Revisions to the PBS&J design to develop were made by USACE in order to develop this cost estimate as follows:

- Roadway quantities for this estimate were prorated from PBS&J pre-final submittal based on the typical sections and calculations presented in that report.

- Bridge quantities for this estimate were prorated from the PBS&J pre-final submittal based on the typical sections and calculations presented in that report.

- No Changes were made to the pricing presented by PBS&J. Pricing in the pre-final submittal is based on FDOT unit pricing. These unit prices were adjusted by PBS&J to account for local market conditions and recent increases & volatility in construction material prices such as cement, steel, asphalt, and fuel. In addition, these unit prices were independently verified by USACE to ensure accuracy by developing independent labor, equipment, and material estimates. Given the nature of this project and it's similarity to other FDOT work, the use of FDOT unit pricing is considered reasonable and prudent for this estimate.

Basis, assumptions and exclusions
All cost in the this estimate is based 2005 Dollars.

Project Narrative:

As stated on the Engineering Appendix this cost estimate is prepared for 2 Bridges. This alternative includes an elevated bridge with cross section shown in plate AX-5. The cross section of the Bridge as shown on plate AX-5 is 47'-1" from outside to outside of barrier and is 2 miles and 1 mile long .
Other main features of the project include milling of existing friction course, overbuild of the existing roadway and new 3/4" friction course for approximatelly 31,338 lf of corridor as shown on plate AX-1. It is also expected that guardrails and some roadway signs be replaced for this alternative since the profile of the road is being raised.

(1) Quantity computations

A) Roadway items were prorated to the 4 Mile Bridge calculated based on typical section plates .

B) Bridge items were prorated to the calculated prepared by PBS&J structural division.

(2) Cost Estimate for the engineering appendix is of Feasibility Phase Type. It is assumed that if the project is developed to a Engineering and Design

Phase that a more detailed estimate would be prepared reflecting the level of detail of the design.

(3) The estimate contains items not detailed in the Plates of the Engineer Appendix Report such as provisions for erosion control, and replacement of roadway signs, which are determined necessary based on construction experience. Estimates and quantities for maintenace of traffic are based on the construction phasing plates included in the Engineer Appendix Report.

Cost estimates were prepared using FDOT Unit Pricing

(4) The format of the estimate follows DOT as per the Standard Specifications for Road and Bridge Construction 2004 sequencing required by the Scope of Work.

No Bid Schedule has been prepared since it is not required for Feasibility Phase Report estimate.

(5) This estimate if "FOR OFFICIAL USE ONLY"

U.S. Army Corps of Engineers
PROJECT TTA10E: GRR/SEIS Tamiami Trail 2 Bridge - 2 BRIDGE ALT.
Budget Estimate for 2 Bridges & Roadway
** PROJECT OWNER SUMMARY - Scope **

		QUANTITY	UOM	CONTRACT	CONTINGN	TOTAL COST	UNIT COST
2B	Roadway & 2 Bridges						
2B-10	Roadway			38,943,897	9,735,974	48,679,871	
2B-20	Bridge (1 Mile)			16,403,208	4,100,802	20,504,010	
2B-21	Bridge (2 mile)			32,826,893	8,206,723	41,033,616	
2B-30	Drainage System (1 Mile)			1,858,501	464,625	2,323,126	
2B-31	Drainage System (2 Mile)			3,717,367	929,342	4,646,708	
2B-40	Utilities Relocation Coordtn			39,775	9,944	49,719	
2B-50	Disposal Fees (1 Mile)			109,643	27,411	137,054	
2B-51	Disposal Fees (2 Mile)			219,286	54,822	274,108	
2B-60	Disposal old Road Bed (1 Mile)			1,988,634	497,159	2,485,793	
2B-61	Disposal old Road Bed (2 Mile)			3,977,271	994,318	4,971,588	
TOTAL	Roadway & 2 Bridges			100,084,475	25,021,119	125,105,593	
TOTAL	GRR/SEIS Tamiami Trail 2 Bridge			100,084,475	25,021,119	125,105,593	

		QUANTITY UOM	CONTRACT	CONTINGN	TOTAL COST	UNIT COST
2B	Roadway & 2 Bridges					
2B-10	Roadway					
2B-10-101	Mobilization (Roadway & Bridge)		3,115,197	778,799	3,893,996	
2B-10-102	MOT Roadway and Bridge		4,999,721	1,249,930	6,249,652	
2B-10-104	Prevention, Control, Erosion		266,362	66,590	332,952	
2B-10-110	Clearing and Grubbing		217,906	54,476	272,382	
2B-10-120	Embankment		2,380,614	595,153	2,975,767	
2B-10-160	Stabilizing		39,165	9,791	48,956	
2B-10-200	Limerock Base		480,483	120,121	600,604	
2B-10-300	Prime and Tack Coats for Base		188,832	47,208	236,041	
2B-10-327	Milling Existing Asphalt Pavt		416,595	104,149	520,744	
2B-10-331	Asphaltic Concrete		13,693,157	3,423,289	17,116,446	
2B-10-337	Asphaltic Concrete Friction Cour		840,104	210,026	1,050,130	
2B-10-430	Existing Culvert Extensions		309,888	77,472	387,360	
2B-10-521	Retaining Wall		6,482,228	1,620,557	8,102,785	
2B-10-536	Guardrail		2,934,879	733,720	3,668,598	
2B-10-540	Temp. Sheet Pile		1,569,067	392,267	1,961,334	
2B-10-575	Seeding and Sodding		631,861	157,965	789,826	
2B-10-700	Highway Signing		35,086	8,771	43,857	
2B-10-706	Reflective Pavement Markers		58,305	14,576	72,882	
2B-10-711	Thermoplastic Traffic Stripes		284,448	71,112	355,560	
	TOTAL Roadway		38,943,897	9,735,974	48,679,871	
2B-20	Bridge (1 Mile)					
2B-20-350	Substructure		2,631,409	657,852	3,289,261	
2B-20-360	Superstructure		13,616,622	3,404,155	17,020,777	
2B-20-370	Bridge approaches		155,177	38,794	193,972	
	TOTAL Bridge (1 Mile)		16,403,208	4,100,802	20,504,010	
2B-21	Bridge (2 mile)					
2B-21-350	Substructure		5,438,466	1,359,616	6,798,082	
2B-21-360	Superstructure		27,233,250	6,808,312	34,041,562	
2B-21-370	Bridge approaches		155,177	38,794	193,972	
	TOTAL Bridge (2 mile)		32,826,893	8,206,723	41,033,616	
2B-30	Drainage System (1 Mile)					
2B-30- 01	Piping and Fittings		1,660,067	415,017	2,075,084	
2B-30- 02	Drainage Structures		198,433	49,608	248,042	

	QUANTITY UOM	CONTRACT	CONTINGN	TOTAL COST	UNIT COST
TOTAL Drainage System (1 Mile)				2,323,126	
2B-31 Drainage System (2 Mile)					
2B-31- 01 Piping and Fittings		3,320,482	830,120	4,150,602	
2B-31- 02 Drainage Structures		396,885	99,221	496,107	
TOTAL Drainage System (2 Mile)		3,717,367	929,342	4,646,708	
2B-40 Utilities Relocation Coordtn					
2B-40- 01 Utilities Relocation Coordtn		39,775	9,944	49,719	
TOTAL Utilities Relocation Coordtn		39,775	9,944	49,719	
2B-50 Disposal Fees (1 Mile)					
2B-50- 10 Disposal Fees		109,643	27,411	137,054	
TOTAL Disposal Fees (1 Mile)		109,643	27,411	137,054	
2B-51 Disposal Fees (2 Mile)					
2B-51- 10 Disposal Fees		219,286	54,822	274,108	
TOTAL Disposal Fees (2 Mile)		219,286	54,822	274,108	
2B-60 Disposal old Road Bed (1 Mile)					
2B-60-110 Clearing and Grubbing		70,317	17,579	87,896	
2B-60-120 Excavation and Disposal		1,918,317	479,579	2,397,896	
TOTAL Disposal old Road Bed (1 Mile)		1,988,634	497,159	2,485,793	
2B-61 Disposal old Road Bed (2 Mile)					
2B-61-110 Clearing and Grubbing		140,637	35,159	175,796	
2B-61-120 Excavation and Disposal		3,836,634	959,158	4,795,792	
TOTAL Disposal old Road Bed (2 Mile)		3,977,271	994,318	4,971,588	
TOTAL Roadway & 2 Bridges		100,084,475	25,021,119	125,105,593	
TOTAL GRR/SEIS Tamiami Trail 2 Bridge		100,084,475	25,021,119	125,105,593	

Currency in DOLLARS

R2029: GRR/SEIS Tamiami Trail 2 No Crew Database selected - No Crew Summaries or Reprice

* * * END OF ERROR REPORT * * *

No Detailed Estimate.

No Backup Reports.

END TABLE OF CONTENTS

Appendix K

BIOLOGICAL ASSESSMENT

CESAJ-PD-ES August 12, 2005

DRAFT
ENDANGERED SPECIES ACT
BIOLOGICAL ASSESSMENT

Tamiami Trail Feature of the
Modified Water Deliveries to
Everglades National Park Project

Location. The project is located in Dade County, Florida along a 10.7-mile segment of Tamiami Trail, U.S. Highway 41, immediately south of Water Conservation Area (WCA) 3B.

Description. The Tentatively Selected Plan entails constructing a 2-mile long bridge on the west side of the project area (x coordinates: 769281 to 779841) and a 1-mile long bridge on the east side (x coordinates: 809300 to 814580) and raising all the unbridged portion of the highway approximately two feet with an asphalt overlay on the existing road. The centerline of the bridge will be offset 46 feet to the south of the existing centerline of the road. At each end of each bridge there will be a 1716-foot section of road that will provide a horizontal S-curve transition to the offset bridge centerline as well as a vertical transition to the 12-foot high bridge deck.

Listed Species Considered. The following species listed under the Endangered Species Act may occur in the project area.

Florida panther - endangered

Everglade snail kite – endangered

Cape Sable seaside sparrow – endangered

West Indian manatee – endangered

Eastern indigo snake – threatened

Wood stork – threatened

Effects on Florida Panther. The primary habitat zone for the panther extends north through NESRS to the southern edge of Tamiami Trail. An approximate 4-mile strip of vegetation will be removed along the highway for construction of the transition roadways and the two bridges. This represents a loss of about 27 acres of panther habitat consisting of about a 25-foot wide linear strip of native and exotic woody vegetation. The USFWS considers this to be low quality

potential panther habitat due to proximity of the highway and the infestation of exotic vegetation. Telemetry data from radio-collared panthers between 1991 and 2000 indicates there were no panthers present in the vicinity of Tamiami Trail. In 2001, collared panther #85 ranged to within about one-half mile south of Tamiami Trail. That panther died last year and no other panthers are known to be in the area (email pers com, Sonny Bass, 8/2/05). The project may provide some protection for any panther that might wander north in the future by providing safe passage across the highway under the two bridges. It is concluded that the project may affect, but is not likely to adversely affect the Florida panther.

Effects on the Everglade Snail Kite. Potential effects on the snail kite would be a result of construction activities during the 36 months it would take to complete the project. Based on nesting data from 2000 to 2004, the closest nests to Tamiami trail that have been recorded to date are 500 feet from the road (2000) and 1800 feet (2004). Because the closest known snail kite nest is a considerable distance from the project area, no specific precautions seem appropriate at this time. The USFWS and the Florida Fish and Wildlife Conservation Commission monitor snail kite nesting and will notify the Corps if new information would warrant a change. There is no designated Critical Habitat located within the project area, so none would be affected. It is concluded that the project may affect, but is not likely to adversely affect the Everglade snail kite.

Effects on the Cape sable Seaside Sparrow. The closest occupied Cape Sable seaside sparrow nest lies 10 miles south of the project area. Construction activities would have no effect on this species. There is no designated Critical Habitat located within the project area, so none would be affected. It is concluded that the project may affect, but is not likely to adversely affect the Cape Sable seaside sparrow.

Effects on the West Indian Manatee. For the period of record of over 20 years, there has been only one recorded manatee utilizing the L-29 Canal adjacent to Tamiami Trail. The likelihood of a manatee occurring in the project area is negligible. There would be no activities in the canal during construction It is concluded that the project may affect, but is not likely to adversely affect the West Indian manatee.

Effects on the Eastern Indigo Snake. This species may be in the project area, although there are no known sightings. It could potentially be affected by construction activities, so the Corps would include the “Standard Construction Precautions for the Indigo Snake” in the project design. It is concluded that the project may affect, but is not likely to adversely affect the Eastern indigo snake.

Effects on the Wood Stork. The wood stork is known to nest in two colonies adjacent on the south to Tamiami Trail named: “Tamiami East” and “Tamiami West”. The eastern one-mile bridge would be constructed midway between

these two colonies, such that the bridge would not overlap the established Primary or Secondary Zones of disturbance. Construction activity for the elevated unbridged road would impinge into the disturbance zone. As such, the Corps would manage the construction activities according to the USFWS “Draft Supplemental Habitat Management Guidelines for the Wood Stork in the South Florida Ecological Services Consultation Area”. By so doing, it is concluded that the project may affect, but is not likely to adversely affect the wood stork.